Ernest Rutherford Fellows Induction Workshop

Wednesday 20 March 2019
Introduction

• Professor Seb Oliver (Chair of the Education, Training and Careers Committee)

STFC Education, Training and Careers Team

• Maggie Wilson
• Clare Heseltine
• Susan Blackwell
• Elaine Poole
• Caroline Sweeting
Agenda

10:30-10:45  Coffee, Welcome and Introductions
            Seb Oliver

10:45-11:15  Introduction to Fellowships, the Education, Training and Careers Committee and Public Engagement
            Clare Heseltine, Elaine Poole, Susan Blackwell, Caroline Sweeting, Neville Hollingworth

11:15-12:05 5 minute presentations by Fellows

12:05-12:20 My First Year as a STFC Fellow
            Sarah Badman, University of Lancaster

12:20-12:35 My life as an STFC Fellow
            Thomas Greve, University College, London

12:35-13:30 Lunch and networking

13:30-13:45 Fellowship Skills & life after a Fellowship
            Gert Aarts, Swansea University

13:45-14:00 10 Years on and Beyond
            Serena Viti, University College, London

14:00-14:15 Questions

14:15-15:00 Coffee, feedback and close
Education, Training and Careers Committee Responsibilities

- Education, Training and Careers Committee (ETCC) meets three times a year
- Accreditation of departments to hold studentships
- Awarding of doctoral training partnership students by algorithm
- Industrial CASE students
- Peer review and award of fellowships
- Peer review of summer schools
- Awarding of STFC Centres for Doctoral Training in Data Intensive Science
- STFC also support Daphne Jackson Fellowships
- Advises on removing barriers to the participation of women and other underrepresented groups in STFC activities
- Monitoring on the participation of underrepresented groups on STFC advisory bodies and applicants
STFC Education, Training and Careers

Fellowships

Investment: £28M p.a., £6M of which is Fellowships

161 fellowship applications received in 2018/19

11 Ernest Rutherford Fellowships awarded in 2019

Less than 7% success rate on fellowships

First round of Future Leaders Fellowships complete. The third round to close in May 19

10 new Stephen Hawking Fellowships in 2020.
STFC Education, Training and Careers

Studentships

Over 900 PhDs supported at any one time

220 Doctoral Training Partnership students allocated per year

Three industrial CASE awards per year

Ten Summer Schools to be supported in 2019 with over 450 students attending

Studentship allocations calculated by an algorithm

Immediate employment of students in diverse sectors of the UK economy, including:
- 51% University
- 6% public sector
- 30% private sector
- 3% teaching or studying

8 Centres for Doctoral Training in Data Intensive Science with over 150 students
Membership of ETCC

• Professor Seb Oliver, University of Sussex (chair)
• Professor Gary Barker, University of Warwick
• Dr Ben Davies, Liverpool John Moores University
• Dr Meghan Gray, University of Nottingham
• Dr Claire Gwenlan, University of Oxford
• Dr David Hall, The Open University
• Professor Giles Hammond, University of Glasgow
• Dr Alison Laird, University of York
• Mr Peter Oakley, TWI Ltd
• Professor Marika Taylor, University of Southampton
• Professor Anu Ojha OBE (Council Member)
Consolidated Grants

- One application per department per call for each research programme with awards made for three years duration.

- Expectation of continued support following review of existing grant – but not guaranteed.

- Consortium grants: essentially joint consolidated grants and potentially of more interest to smaller departments. Must have a common research programme between the departments.

- New Applicant scheme: Newly appointed academic members of staff who have joined a department between grant reviews may exceptionally apply separately for support.

- A review of the CG mechanism has recently taken place to discuss whether it is still fit for purpose and meeting the needs of our community. The report and recommendations have not yet been published.
Major Projects and PRD

• Large Projects: major new projects such as participation in new experiments or missions, the development of new instruments or upgrades to existing detectors. Process starts with Statement of Interest to Science Board.

• PRD: intended to develop capabilities needed to underpin UK science and technology leadership in future STFC projects.
Open Access and Outcome Reporting

Papers generated from the Fellowship must be published in journals that are compliant with the UK Research and Innovation open access policy.

UK Research and Innovation recognises a journal as being compliant with this policy if:

- The journal provides, via its own website, immediate and unrestricted access to the final published version of the paper, which should be made available using the Creative Commons Attribution (CC BY) licence, and allows immediate deposit of the final published version in other repositories without restriction on re-use. This may involve payment of an ‘Article Processing Charge’ (APC) to the publisher.

Or

- The journal consents to deposit of the final Accepted Manuscript in any repository, without restriction on non-commercial re-use and within six months of online publication. No APC will be payable to the publisher.
Open Access and Reporting continued

• If applicable, papers should also include a statement of how the underlying research materials – such as data or models – can be accessed.

• Full policy at: https://www.ukri.org/files/legacy/documents/rcukopenaccesspolicy-pdf/
External Innovations

- Innovations and 21st Century Challenges Programme
- Official Development Assistance Programmes
- Global Challenge Research Fund
- Industrial CASE and CASE Plus
- Knowledge Transfer Partnerships
- Innovation Partnership Scheme
- Royal Society of Edinburgh Enterprise Fellowship
- Impact Acceleration Accounts
Innovations and 21\textsuperscript{st} Century Challenges Programme

Why and how?

- Maximise benefits to UK economy/society from STFC
- Support/funding for innovation, commercialisation & Official Development Assistance activities
- Build relationships between STFC community and other disciplines and sectors (industry, government departments and agencies etc)

Who can apply?

- STFC University community, STFC labs, international facilities (e.g. CERN, ESO)
- Other disciplines or partners (e.g. industry) in collaboration with partner from STFC community
### Innovation and 21st Century Challenges Programmes

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<th>Scheme</th>
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<td>Empowering/Flexible</td>
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<td>Industrial CASE &amp; CASE plus</td>
<td>Knowledge Transfer Partnerships</td>
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<td>Royal Society of Edinburgh Enterprise Fellowship</td>
<td>Follow-on-Fund</td>
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**Notes:**
- Non-academic partner encouraged
- Non-academic partner required
Official Development Assistance Programmes

- An initiative intended to strengthen research and innovation partnerships between the UK and emerging knowledge economies.
- Forms part of the UK’s Official Development Assistance (ODA) commitment
- ~16 partner countries
- Projects must:
  - address poverty and development issues;
  - address the issue identified effectively and efficiently;
  - use the strengths of the UK to address the issue;
  - demonstrate that the research component is of an internationally excellent standard.
Global Challenges Research Fund

£1.5 billion fund announced by the UK Government to support cutting-edge research that addresses the challenges faced by developing countries through:

- challenge-led disciplinary & interdisciplinary research
- strengthening capacity for research & innovation within both the UK & developing countries
- providing an agile response to emergencies where there is an urgent research need.

Leave no one behind

- Secure & resilient food systems supported by sustainable marine resources and agriculture
- Sustainable health & well being
- Inclusive & equitable quality education
- Clean air, water & sanitation
- Affordable, reliable, sustainable energy

Sustainable societies & economies

- Sustainable livelihoods supported by strong foundations for inclusive economic growth & innovation
- Resilience & action on short-term environmental shocks & long-term environmental change
- Sustainable cities & communities
- Sustainable production & consumption, e.g. materials & other resources

Support peace and justice

- Understand & effectively respond to forced displacement and multiple refugee crises
- Reduce conflict & promote peace, justice & humanitarian action
- Reduce poverty & inequality, including gender inequalities
Industrial CASE Studentships

- Competition opens each year (early August, closing October)
- Joint supervision of student with RO and non-academic partner
- Minimum time at industrial setting 9mths over duration of PhD period
- Examples of industrial partners: MoD/e2v/NHS/Rapiscan Systems Ltd/Micron Semiconductor Ltd/National Physical Laboratory
- SME contributions to host and student’s stipend are covered by the STFC
- [http://www.stfc.ac.uk/funding/studentships/industrial-case-studentships](http://www.stfc.ac.uk/funding/studentships/industrial-case-studentships)
Some examples of recent CASE studentships:

Development of Monolithic CMOS Image Sensors Using Charge Transfer and Electron Multiplication. Open University in collaboration with e2v technologies (UK) Ltd.

Development of a manufacturing prototype of advanced broad-band high-power radio-frequency amplifiers for electron-beam feedback and control systems. University of Oxford in collaboration with TMD Technologies Ltd.

Submarine Reactor Monitoring with Anti-Neutrinos. University of Liverpool in collaboration with the Defence Academy of the United Kingdom (Ministry of Defence).

Next^2 TEM Detection – Investigation of Hybrid Pixel Detectors for future Transmission Electron Microscopy Imaging. The University of Glasgow in collaboration with Quantum Detectors Ltd.

Improved identification of illicit materials using an X-ray backscattering technique. The University of Manchester in collaboration with Rapiscan Systems Ltd.

Validation of uptake, heterogeneity and shape metrics in clinical PET-CT using Monte Carlo Simulation and 3D printed anthropomorphic phantoms. The University of Manchester in collaboration with The Christie NHS Foundation Trust.
STFC Summer Schools

- Strings, Gravity and Gauge Theory, University of Southampton
- 9th NExT PhD Workshop, to be held at Coseners House organised by the University of Southampton
- Data Intensive Science and Technologies (DIST), University of Sussex
- Nuclear Physics, University of St Andrews
- British Universities Summer School in Theoretical Elementary Particle Physics (BUSSTEPP), University of Glasgow
- Monte Carlo Radiation Hydrodynamics, University of St Andrews
- Introductory Solar System Plasmas, University of Aberystwyth
- Introductory Summer School in Astronomy, University of Kent
- Advanced Solar System Plasmas, Lancaster University
- High Energy Physics, location to be confirmed

https://stfc.ukri.org/funding/studentships/stfc-support-for-short-courses-and-summer-schools/
We provide a feature on our website of our funded fellows. You may be approached at a later date to provide a summary.

UK Research and Innovation Future Leaders Fellowships

Supporting early career researchers and innovators with outstanding potential across the whole of the UK Research and Innovation remit.

The objectives of the scheme are:

• To develop, retain, attract and sustain research and innovation talent in the UK.
• To foster new research and innovation career paths including those at the academic/business and interdisciplinary boundaries and facilitate movement of people between sectors.
• To provide sustained funding and resources for the best early career researchers and innovators.
• To provide long-term, flexible funding to tackle difficult and novel challenges and support adventurous, ambitious programmes.

Round 3 will be open for outline applications on 2 April and full applications on 15 April, closing 2 May 2019. Up to 100 Fellowships available to award with up to 7 years (4+3 model).

Please see the UKRI Future Leaders Fellowship webpage for more information:
https://www.ukri.org/funding/funding-opportunities/future-leaders-fellowships/
It was announced in June 2018 that the new Fellowships are to be created in tribute to Professor Stephen Hawking. They will be awarded to exceptional candidates completing their doctoral studies in the fields of maths, physics and computer sciences.

UK Research and Innovation will award up to ten Stephen Hawking Fellowships a year for the next 5 years.

Up to date information will be published on the UK Research and Innovation website.

Transfers

• Not normally allowed in first year of the fellowship
• For scientific or domestic reasons
• Agreement from both institutions
• Approval by STFC
• Under consideration by the Education, Training & Careers Committee
Childcare Costs for Conference Attendance or Collaborative Visits

• Contribution to childcare expenses if substantial childcare costs as a result of an activity associated with the fellowship
• Funds are for family support for the cost of childcare during a conference or collaborative visit
• Maximum of £500 per claim
• Up to three claims can be made during the fellowship
• Forms available from fellowships@stfc.ac.uk
Fellowship Questionnaire

STFC requires Fellows to complete a short questionnaire giving details of the post taken up on completion of the fellowship

- Guidance, training advice & support from your research organisation
- Mentoring received
- Current employment status
- Extent your fellowship helped towards current job
- Influences in accepting your job
Analysis of Fellowship Questionnaires 2018/19

Key findings:

- All fellows were employed and all had permanent positions;
- All fellows had remained in the UK after their fellowship had ended and had remained at the research organisation where they held their fellowship. Two of these fellows had transferred their fellowship from their original host institution as they had been offered proleptic positions;
- All positions held fell within the remit of STFC science;
- All fellows were employed in either academic research or lecturing or both;
- All fellows found that their fellowship had been either essential (63%) or very helpful (37%) in order to obtain their current position;
- The main factor influencing fellows into accepting their position was: the opportunity to pursue original research in the same field.
In line with the expectations of research organisations, fellows reported on what mentoring opportunities were given during their fellowship:

- my University provided me with two mentors, both of which are senior professorial staff in the same department as me. They were very helpful during my 5 years as an STFC Fellow, and provided me with guidance on how to supervise students and post-doctoral researchers, something which I hadn’t previously done;

- at the School level, I was assigned a member of academic staff as a mentor. This relationship worked mostly on a casual level, and it was/is very valuable. At the University level, I recently got accepted on a mentoring scheme aimed at women in mid-career positions (Reader/Senior Lecturer and above);

- I received a lot of useful mentoring from senior academics;

- I was given formal mentorship and training through university career development processes in all areas. As a group member I received informal mentorship and support in developing my own research profile and taking on leadership roles from two individuals, who both gave me excellent advice and support.
Analysis of Fellowship Questionnaires 2018/19

Extracts from explanations on the extent to which their fellowship helped them get their job:

• my university was able to perform leverage with my ERF, allowing me to become academic staff within the 5-year timeframe. I therefore feel my ERF was very helpful in securing a ‘permanent’ academic post;

• winning an ERF meant that I was able to maximise my research output over the early parts of the Fellowship, whilst at the same time arguing strongly within my host institution for the creation of a permanent position that fit my profile;

• the Fellowship gave me independence in my research for a significant period of time, allowing me to develop leadership and develop my career. It also gave me a bargaining position with institutions when securing a permanent appointment.

• the flexibility of the fellowship, and the independence it afforded me, allowed me to imbed myself in the School, pursue timely and different avenues of research, and explore leadership roles in a way that made me a much more valuable member of the academic community – in the School and beyond.
Researchfish

- Researchfish is an online system which is pivotal in demonstrating the case for investment in science. STFC has a responsibility to demonstrate the value and impact of research supported through public funding. By using Researchfish we have a central means for researchers to log the outputs, outcomes and impacts that have been realised through STFC's research funding.
- Outputs are then made available through the Research Councils’ ‘Gateway to Research’ portal
- STFC use outputs submitted via Researchfish to analyse how our awards portfolio is contributing to us achieving our strategic goals of World-Class Research, World-Class Innovation and World-Class Skills
- Principle Investigators (PIs) including fellows with a UK Research and Innovation Councils funded award will be required to submit outputs from their work via Researchfish
- Researchfish is open all year round for users to add outputs; however, these can only be submitted during a submission period (usually Feb – Mar). Failure to make submissions may lead to sanctions being imposed by UK Research and Innovation
- UK Research and Innovation will ask PIs to submit outputs for at least five years after the end of the award. This is to allow them to capture the full impact of your work.
Useful links

Ernest Rutherford Fellowship Guidance Notes
UK Research and Innovation Policy and Frameworks
Fellowships team
Education, Training and Careers Committee
JeS
Research Grant Handbook
UKRI FEC Research Grant T&Cs
Peer review pages
Call closing dates page
Success Rates
Ranking Lists
Gateway to Research
Inspiring & Involving

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Incredible Science • Inspirational People • Astounding Places
STFC support: understanding the community
STFC support: public engagement funding

Spark Awards
Delivering new engagement activities and test approaches with audiences
Spring/Autumn

Nucleus Awards
Building engagement networks and delivering national programmes
Autumn

Legacy Awards
Supporting our most successful programmes to grow and evolve
Late Spring

Reaction Awards
Quickly responding to unexpected and engaging scientific developments
Responsive

Leadership Fellows
Personal Fellowships to raise the standards of engagement in the community
Winter
When: 4\textsuperscript{th} September 10am till 4pm

Where: UCLAN

Any Questions?